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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,014

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Gerald Hobisch

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EXAMINER

DOLLINGER, MICHAEL M

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/565,014	Applicant(s) HOBISCH ET AL.	
	Examiner MICHAEL DOLLINGER	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>01/18/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 3 recites the limitation "the monomers A1" in line 1. There is insufficient antecedent basis for this limitation in the claim. For purposes of examination, Examiner assumes "the monomers A1" refers to the monomers A1 of claim 2.

4. Claim 4 recites the limitation "the mass fraction of the monomers A1 in the mixture of the monomers A1 and A2" in lines 1 and 2. There is insufficient antecedent basis for this limitation in the claim. For purposes of examination, Examiner assumes the monomers A1 and A2 refer to the monomers A1 and A2 of claim 2.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Kadambande et al (US 6,627,700 B1).

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7. Kadambande et al disclose an aqueous dispersion of an acrylate-modified resin [2:8-10] which may also include pigments [11:10-12]. The acrylate-modified alkyd resin is prepared by graft copolymerizing an alkyd resin with a mixture of methacrylic acid and at least one further, carboxyl-free olefinically unsaturated monomer [2:9-19] and has an acid number from 20 to 70 mgKOH/g [2:63-64]. The fraction of polyacrylate based on acrylated-modified alkyd resin is preferably 20 to 80% by weight, most preferably 45 to 55% by weight [10:28-34]. The alkyd resin has a number average molecular weight of from 1,000 to 3,000, a hydroxyl number from 30 to 150 mgKOH/g [3:3-9], and is prepared by the condensation of monomers including aliphatic and aromatic dicarboxylic acids [3:38-39] and aliphatic diols [4:17-34].

8. Kadambande et al do not explicitly disclose the carboxyl number of the grafted polyacrylate. However, the acrylate-modified polyester resin has a carboxyl number corresponding to the claimed range of the carboxyl number of the AB resin and the alkyd resin has a hydroxyl number and molecular weight corresponding to the claimed ranges of these values for the polyester B. Furthermore, the acrylate monomers of Kadambande et al correspond to the claimed acrylate monomers of component A. Since the carboxyl number of the resulting resin (resin AB or the acrylate-modified alkyd resin) will depend on the other parameters mentioned above *and* the acid number of polyacrylate, the range of the acid number of the polyacrylate of Kadambande et al would be expected to be the same as the claimed range of the acid number of the component A. Therefore, it is the examiner's position that the claimed range of the acid

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number of the component A is held to be inherent in the polyacrylate of Kadambande et al.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dworak et al (US 2002/0077389 A1).

3. Dworak et al disclose aqueous binder mixtures comprising and their use in water-dilutable primer surfacers for automobiles finishing comprising condensation product AB of hydroxyl group-containing resins B and water-soluble or water-dispersible resins A containing acid groups [0010] and pigments [0032]. The condensation products AB preferably have an acid number of from 25 to 75 mg/g and are prepared using the components A and B in a mass ratio of from 10:90 to 80:20, preferably 15:85 to 40:60

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[0015]. The resins A may be acidic acrylate resins A5 with an acid number from 100 to 230 mg/g and in particular 70 to 160 mg/g [0016]. The acrylate resins A5 may be copolymerized from monomers A51 olefinically unsaturated carboxylic acids such as acrylic acid (which read on the claimed monomer A1), monomers A52 which are other vinyl or acrylic monomers such as alkyl esters of acrylic and methacrylic acids (which read on the claimed monomer A2), and optionally monomers A53 which include lactones with unsaturation (which also read on the claimed monomer A2) [0022].

Dworak et al do not disclose amounts of the monomers of A5, but one would readily envisage a compound A5 consisting of monomers in the ratio A51/A52/A53 of 33%/33%/33%, since A52 and A53 read on the claimed monomer A2 and A51 reads on the claimed monomer A1 this ratio would result in a mixture of A1 and A2 monomers with 33% A1 contained therein. The resins B may be polyesters B1 with a hydroxyl number from 70 to 300 mg/g [0024]. The polyesters resins B1 are prepared by polycondensation from polyols B1 including aliphatic and cycloaliphatic alcohols having on average at least 2 hydroxyl groups per molecule (which read on the claimed monomer B1) [0025; 0017] and polycarboxylic acids B2 including aliphatic, cycloaliphatic and aromatic polycarboxylic acids (which read on the claimed monomer B2) [0025:0017]. In the inventive examples 1-3, the pigment titanium dioxide is used an amount of 43.3 to 44 g of titanium dioxide to 100 g of condensation resin AB [Tables 2 and 3; 0060].

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4. Regarding claim 6, case law holds that the selection of any order of mixing ingredients is *prima facie* obvious. *In re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA 1930).

5. Dworak et al do not disclose the molar mass of polyesters B1. However, Dworak et al do disclose the molecular weight of hydroxyl group containing polyurethane resins B3, an alternative to the polyesters B1 in condensation product B. Dworak et al disclose that the polymeric polyols B31, reacted with isocyanates B32 to make polyurethane B3, have a number average molar mass of from about 200 to 10,000 g/mol [0027]. Since polymeric polyols B31 make up the bulk of the hydroxyl group containing polyurethane B3 and since B3 and B1 have the same hydroxyl and acid numbers (which depend on molar mass), one having ordinary skill in the art would have used the molar mass for the B31 polymeric polyols in determining the molar mass appropriate for the polyester B1.

6. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buter et al (US 2002/0016407 A1).

7. Buter et al disclose an aqueous crosslinkable binder composition comprising an aqueous dispersion of a polyester-polyacrylate hybrid resin [0015] and optionally a pigment [0062; 0066; 0068]. The polyester-polyacrylate resin is composed of 50 to 90 wt% polyester and 10 to 50 wt% polyacrylate and prepared wherein the acrylate monomers are grafted to a partially unsaturated hydroxy functional polyester resin [0015]. The polyester-polyacrylate has a carboxylic acid number of 1 to 40 mgKOH/g

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[0055]. The hydroxy functional polyester resin has a hydroxyl value of 50 to 350 mgKOH/g, a number average molecular weight of 400 to 3,000, and is obtainable by reaction mixture of polycarboxylic acids including aliphatic acid with 6-12 carbon atoms and (cyclo)aliphatic diols [0015]. The polyacrylates have a COOH value of 20 to 80 mgKOH/g [0052], are prepared from hydrophobic monomers (a) including aromatic vinyl compounds and (cyclo)alkyl(meth)acrylates (which read on the claimed monomers A2) [0016] and hydrophilic monomers (b) including (meth)acrylic acid (which read on the claimed monomers A1) [0017]. The molar ratio of components (a) and (b) is between 1:2 and 3:1, preferably between 1:1 and 2:1 [0051]; taking preferred monomer (a) styrene and monomer (b) acrylic acid, this results in a mass fraction of monomer (b) of 19% to 59%, preferably 26% to 41%. Examiner takes the position that since the polyester portion of the polyester-polyacrylate is a condensation polymer, the polyester-polyacrylate reads on a condensation resin AB.

8. Regarding claim 6, case law holds that the selection of any order of mixing ingredients is *prima facie* obvious. *In re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA 1930).

9. Most of the ranges disclosed above are overlapping with their corresponding claimed ranges. In the case where the claimed ranges overlap or lie inside ranges disclosed by the prior art, a *prima facie* case of obviousness exists, see *In re Wertheim*, 541 F.2d 257, 1911 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

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10. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kadambande et al (US 6,627,700 B1).

11. Regarding claim 4, Example 1 of Kadamdande et al disclose the acrylate-modified alkyd resin wherein the methacrylic acid monomer (corresponding to the claimed monomers A1) are present in a mass fraction of the mixture of methacrylic acid and olefinically unsaturated non-carboxylic acid containing monomers (corresponding to the claimed monomers A2) of 8.2%. A prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985).

12. Regarding claim 6, Regarding claim 6, case law holds that the selection of any order of mixing ingredients is *prima facie* obvious. *In re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA 1930).

International Search Report

13. X category reference EP 0 962 507 A cited in the International Search Report was not used in a 35 USC 102 or 103 rejection because it does not disclose a polymer that reads on the claimed polyester B.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL DOLLINGER whose telephone number is

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(571)270-5464. The examiner can normally be reached on Monday - Thursday
7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Randy Gulakowski/
Supervisory Patent Examiner, Art Unit 1796

MICHAEL DOLLINGER
Examiner
Art Unit 1796

/mmd/